

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A Web service coordination plan creating apparatus, comprising:

a first storage section which stores user data that makes predicates indicating a states of a user;

a second storage section which stores a database that associates preconditions representing, in predicate form, necessary conditions for users to use Web services via an information communication network, with post conditions representing, in predicate form, the effects of invocation of the corresponding Web services; and

coordination plan creating means for, when receiving a user's request including search conditions for the Web services, acquiring matching user data in predicate form corresponding to the user's request from the first storage section, acquiring from the second storage a combination of Web services which satisfies the user's request by logically combining the preconditions and post conditions for a plurality of Web services including a first Web service having the preconditions matching with the user data and a second Web service having the post conditions matching with the user data, and creating a Web service linking plan where the first individual Web services service included in the combination are is arranged in the to be performed after the second Web service included in the combination, based on an order of the logical combination.

Claim 2 (Original): The Web service coordination plan creating apparatus according to claim 1, wherein

the coordination plan creating means carries out

a first process of matching the predicate of the precondition with the predicate of the user data and matching the predicate of the post condition with the predicate of the user's request in respect to one Web service, and

a second process of matching the predicate of the precondition with a first predicate including the predicate of the user data unmatched in the first process and matching the predicate of the post condition with a second predicate including the predicate of the user's request unmatched in the first process in respect to other Web services excluding the one Web service.

Claim 3 (Original): The Web service coordination plan creating apparatus according to claim 2, wherein

the coordination plan creating means carries out the second process by calling the first process recursively.

Claim 4 (Original): The Web service coordination plan creating apparatus according to claim 1, wherein

the coordination plan creating means carries out

a first process of matching the predicate of the precondition with the predicate of the user data and matching the predicate of the post condition with the predicate of the user's request in respect to one Web service, and

a third process of matching the predicate of the post condition with a third predicate including the predicate of the user's request unmatched in the first process in respect to other Web services excluding the one Web service.

Claim 5 (Original): The Web service coordination plan creating apparatus according to claim 4, wherein

the coordination plan creating means carries out the third process by calling the first process recursively.

Claim 6 (Original): The Web service coordination plan creating apparatus according to claim 1, further comprising:

a third storage section which stores an ontology dictionary where a plurality of predicates describing each state by predicate logic notation are classified hierarchically in database form, wherein

the coordination plan creating means creates matching user data by changing the predicate included in the user's request according to a hierarchical level in the ontology dictionary.

Claim 7 (Currently Amended): A Web service coordination plan creating method which uses user data that makes predicates indicating the states of users and a database that associates preconditions representing, in predicate form, necessary conditions for users to use Web services via an information communication network, with post conditions representing, in predicate form, the result of receiving the Web services to correspond to the Web services, the Web service linking plan method comprising:

a first step of, when receiving a user's request including search conditions for the Web services, acquiring matching user data in predicate form corresponding to the user's request from a first storage section;

a second step of acquiring from the second storage a combination of Web services which satisfies the user's request by logically combining the preconditions and post

conditions for a plurality of Web services including a first Web service having the preconditions matching with the user data and a second Web service having the post conditions matching with the user data; and

a third step of creating a Web service linking plan where the ~~individual~~ first Web ~~services~~ service included in the combination acquired in the second step ~~are~~ is arranged ~~in the~~ to be performed after the second Web service included in the combination based on an order of the logical combination.

Claim 8 (Original): The Web service coordination plan creating method according to claim 7, wherein

the second step includes

a fourth step of matching the predicate of the precondition with the predicate of the user data and matching the predicate of the post condition with the predicate of the user's request in respect to one Web service, and

a fifth step of matching the predicate of the precondition with a first predicate including the predicate of the user data unmatched in the fourth step and matching the predicate of the post condition with a second predicate including the predicate of the user's request unmatched in the fourth step in respect to other Web services excluding the one Web service.

Claim 9 (Original): The Web service coordination plan creating method according to claim 8, wherein

the second step is a step of carrying out the fifth step by calling the fourth step recursively.

Claim 10 (Original): The Web service coordination plan creating method according to claim 7, wherein

the second step includes

a sixth step of matching the predicate of the precondition with the predicate of the user data and matching the predicate of the post condition with the predicate of the user's request in respect to one Web service, and

a seventh step of matching the predicate of the post condition with a third predicate including the predicate of the user's request unmatched in the sixth step in respect to other Web services excluding the one Web service.

Claim 11 (Original): The Web service coordination plan creating method according to claim 10, wherein

the second step is a step of carrying out the seventh step by calling the sixth step recursively.

Claim 12 (Original): The Web service coordination plan creating method according to claim 7, further comprising:

using an ontology dictionary where a plurality of predicates describing each state by predicate logic notation are classified hierarchically in database form, wherein

the first step is a step of creating matching user data by changing the predicate included in the user's request according to a hierarchical level in the ontology dictionary.

Claim 13 (Currently Amended): A recording medium which records a program for causing a computer to carry out a Web service coordination plan creating method which uses user data that makes predicates indicating the states of users and a database that associates

preconditions representing, in predicate form, necessary conditions for users to use Web services via an information communication network, with post conditions representing, in predicate form, the result of receiving the Web services to correspond to the Web services, the program comprising:

a first instruction which causes the computer to execute a first step of, when receiving a user's request including search conditions for the Web services, acquiring matching user data in predicate form corresponding to the user's request from a first storage section;

a second instruction which causes the computer to execute a second step of acquiring from the second storage a combination of Web services which satisfies the user's request by logically combining the preconditions and post conditions for a plurality of Web services including a first Web service having the preconditions matching with the user data and a second Web service having the post conditions matching with the user data; and

a third instruction which causes the computer to execute a third step of creating a Web service linking plan where the ~~individual-first Web services-service~~ included in the combination acquired in the second step ~~are is~~ arranged ~~in the to be performed after the~~ second Web service included in the combination based on an order of the logical combination.

Claim 14 (Original): The recording medium according to claim 13, wherein
the second instruction includes

a fourth instruction which causes the computer to execute a fourth step of matching the predicate of the precondition with the predicate of the user data and matching the predicate of the post condition with the predicate of the user's request in respect to one Web service, and

a fifth instruction which causes the computer to execute a fifth step of matching the predicate of the precondition with a first predicate including the predicate of the user data unmatched in the fourth step and matching the predicate of the post condition with a second predicate including the predicate of the user's request unmatched in the fourth step in respect to other Web services excluding the one Web service.

Claim 15 (Original): The recording medium according to claim 14, wherein the second step is a step of carrying out the fifth step by calling the fourth step recursively.

Claim 16 (Original): The recording medium according to claim 13, wherein the second instruction includes a sixth instruction which causes the computer to execute a sixth step of matching the predicate of the precondition with the predicate of the user data and matching the predicate of the post condition with the predicate of the user's request in respect to one Web service, and a seventh instruction which causes the computer to execute a seventh step of matching the predicate of the post condition with a third predicate including the predicate of the user's request unmatched in the sixth step in respect to other Web services excluding the one Web service.

Claim 17 (Original): The recording medium according to claim 16, wherein the second step is a step of carrying out the seventh step by calling the sixth step recursively.

Claim 18 (Currently Amended): The recording medium according to claim 13,
further comprising:

using an ontology dictionary where a plurality of predicates describing each state by
predicate logic notation are classified hierarchically in database form, wherein

the ~~first~~ first step is a step of creating matching user data by changing the predicate
included in the user's request according to a hierarchical level in the ontology dictionary.